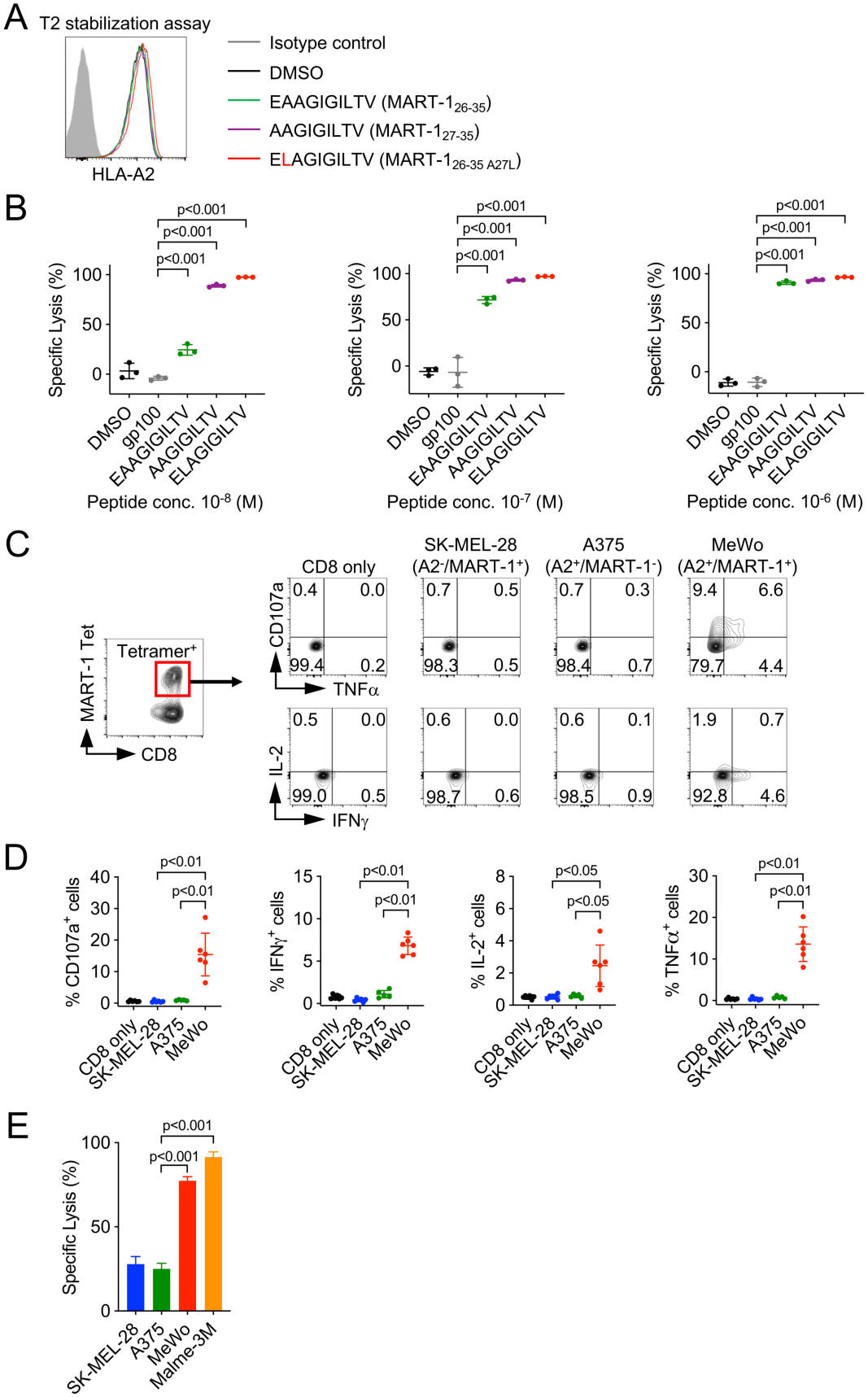
A
T2 stabilization assay
HLA-A2
Isotype control
DMSO
EAAGIGILTV (MART-1 26-35)
AAGIGILTV (MART-1 27-35)
ELAGIGILTV (MART-1 26-35 A27L)
B
Specific Lysis (%)
p<0.001
DMSO
gp100
EAAGIGILTV
AAGIGILTV
ELAGIGILTV
Peptide conc. 10-8 (M)
Peptide conc. 10-7 (M)
Peptide conc. 10-6 (M)
C
MART-1 Tet
Tetramer+
CD8
CD8 only
SK-MEL-28 (A2-/MART-1+)
A375 (A2+/MART-1-)
MeWo (A2+/MART-1+)
CD107a
TNFα
IL-2
IFNγ
D
% CD107a+ cells
% IFNγ+ cells
% IL-2+ cells
% TNFα+ cells
p<0.01
p<0.05
E
Specific Lysis (%)
SK-MEL-28
A375
MeWo
Malme-3M

Figure S4. Functional analysis of MART-1 Tet$^+$ CD8$^+$ T-cells against melanoma cell lines. (**A**) HLA stabilization assay with T2 cells. MART-1 peptides (MART-$1_{26\text{-}35}$; EAAGIGILTV, MART-$1_{27\text{-}35}$; AAGIGILTV, MART-$1_{26\text{-}35\ A27L}$; ELAGIGILTV) were loaded on T2 cells and expression levels of HLA-A2 were analyzed. (**B**) Cytotoxic activity of MART-1 Tet$^+$ CD8$^+$ T-cells against peptide-loaded T2 cells at various peptide concentrations. Data represent mean ± SD of three experiment replicates and are representative from 3 melanoma patients. Significance was assessed by Student's two-tailed *t* test. (**C**) Representative staining pattern of MART-1 Tet$^+$ CD8$^+$ T-cells for CD107a and indicated cytokines. The expanded CD8$^+$ T-cells were co-cultured with SK-MEL-28, A375 and MeWo cells. (**D**) Summary of expression of CD107a, TNFα, IFNγ and IL-2 from melanoma patients' T cells (n=5-6). Significance was assessed by Student's two-tailed paired *t* test. (**E**) Summary of the cytotoxic activity at E:T ratio of 10:1. Significance was assessed by one-way ANOVA and Tukey's multiple comparisons post-hoc test. Error bars indicate mean ± SD.